



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/944,495 | 08/31/2001 | Yuri Kazakevich | 00167-376001 | 2636 |

7590 12/02/2004
Smith & Nephew, Inc.
Chief Patent Counsel
1450 Brooks Road
Memphis, TN 38116

EXAMINER

CRANE, SARA W

ART UNIT PAPER NUMBER

2811

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,495

Applicant(s)

KAZAKEVICH, YURI

Examiner

Sara W. Crane

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) 1-31 and 66-68 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 48-50 and 60-65 is/are allowed.
- 6) ☐ Claim(s) 32-40, 42-47, 51-59 is/are rejected.
- 7) ☒ Claim(s) 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

Claim 41 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 48-50 and 60-65 are allowed.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 32-37, 39-40, 42, 46-47, and 51-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haeefe et al.

With respect to claim 32, Haeefe et al. teaches a light source for an endoscope having a plurality of LEDs 20 (figure 3a), each in an encasement having an aperture for a fiber optic 16. An optical system comprising at least the fibers and their associated mounting and coupling mechanisms has a proximal end adjacent the LEDS (analogous to the proximal end of Applicant fibers, also each adjacent to LEDS). Each LED aperture receives its associated portion of the proximal end of the optical fibers. The output of the fiber optics is received by the endoscope and the fibers and the LEDS provide in aggregate an illumination path. The claim is anticipated, hence obvious. With respect to claim 35, the ends of the fibers adjacent components 13 and 14 (figure 5a) act as a light guide extending to the output at the end (bottom of figure 5a). With

Art Unit: 2811

respect to claims 39-40, column 7, lines 63-66, teaches the LED including or in contact with a phosphor material. With respect to claim 42, figure 4a shows a light concentrator reflecting the LED light. With respect to claims 46-47, laser diodes would have been obvious because of known advantageous properties and light emitting diodes, including for example bright and collimated light. With respect to claim 51, transparent epoxy is well-known for LED encasements. With respect to claim 52, it would have been obvious to place the spliced end of the fiber immediately adjacent the semiconductor LED top layer, instead of on top of a package, in order to increase the amount of light coupled into the fiber. With respect to claim 53, the top of the LED packages are lenses. With respect to claims 54-58, focusing, and collimating components, and alignment of components as recited, would have been obvious in order to increase the amount of useful light emitted at the end of the endoscope.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haefele et al. in view of Mueller-Mach et al.

Column 1, lines 14-18, teaches that UV LEDs are known alternatives to blue LEDs for generating white light by phosphor conversion. It would have been obvious to use UV instead of the blue LEDs taught by Haefele et al. in order to take allow flexibility in choice of phosphor, for example.

Claims 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haefele et al. in view of Begemann.

It would have been obvious to use combinations of LEDs of various colors as recited to obtain white light as desired by Haefele et al., in view of column 3, lines 4-10, which teaches the combinations used to obtain white.

Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haefele et al. in view of Haar et al.

Column 13, lines 50-60, motivate the use of rectangular fiber, in order the allow for different materials having different desired properties as noted.

Conclusion

Applicant's remarks with respect to the rejected claims have been considered, but as noted above, it appears to the examiner that the claims do not distinguish over the prior art of Haefele et al., for example.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

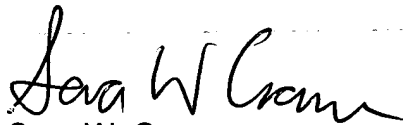
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 2811

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Crane, whose telephone number is (571) 272-1652.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist, whose telephone number is (571) 272-1562.


Sara W. Crane
Primary Examiner
Art Unit 2811